

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Eric N. OLSON

Serial No.: 10/043,658

Filed: January 9, 2002

For: METHODS FOR PREVENTING
HYPERTROPHY AND HEART FAILURE
BY INHIBITION OF MEF2
TRANSCRIPTION FACTOR

Group Art Unit: 1632

Examiner: Woitach, J.

Atty. Dkt. No.: MYOG:024USC1/SLH

Confirmation No.: 7444

CERTIFICATE OF ELECTRONIC SUBMISSION

DATE OF SUBMISSION: September 12, 2006

DECLARATION OF TIMOTHY MCKINSEY UNDER 37 C.F.R. §1.131

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-01450

I, Timothy McKinsey, to declare that:

1. I currently hold the position of Scientist III at Myogen, Inc., licensee of the above-captioned application. I also hold academic appointments in the Division of Cardiology at the University of Colorado Health Sciences Center in Denver, CO, and in the Department of Molecular Biology in Boulder, CO. My education and training has been summarized previously in an earlier declaration filed in this prosecution.

2. I am familiar with the level of skill of scientists working in the field of cardiology and molecular biology as of the priority date of the referenced application. I consider one of ordinary

skill in the art in this field of study to have a Ph.D. in biochemistry, chemistry, molecular biology, pathology or other related field, or an M.D., with 1-3 years of post-graduate study.

3. Attached to this declaration are two figures that describe an experiment performed in the laboratory of Dr. Eric Olson, the inventor of the present application and my former research advisor. Dr. Olson has recently provided these data in support of the application. The experiments involved the use of one month-old MEF2D knockout mice. Fig. A shows both the knockouts and wild-type littermates subjected to sham operation or thoracic aortic banding (TAB) for 20 days. TAB induced a 27% increase in heart weight-to-tibia length ratio, indicative of cardiac hypertrophy. The hypertrophic response to TAB was eliminated in animals lacking a functional *MEF2D* gene. Fig. B shows animals were treated as described in Fig. A. Left ventricles were fixed and stained with hematoxylin (red) and Mason's trichrome (blue) to reveal cardiac muscle and fibrotic lesions, respectively. Thus, in my view, this figure shows the MEF2D, in addition to MEF2A and MEF2C, plays a role in cardiac hypertrophy.

4. I hereby declare that all statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date

Timothy McKinsey, Ph.D.